Operation/Reference Guide

AVS-SL-PR-0201-0301

Solecis Presentation Switcher
2x1:2 RGBHV, 3x1 SVID, 5x1 Stereo, CP

Solecis Switchers

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Safety Instructions

Overview

Please read these instructions before using your Solecis switcher. Failure to comply with these instructions could result in fire, electrical shock, personal injury, death, or damage to the equipment.

Power Source

Use only a three-wire grounding type source. The power source should not exceed 264VAC. Do not remove under any circumstances the ground wire.

Power Cord

Use only the cord shipped with the unit. Do not use the cord if it has become damaged or frayed. Contact your Solecis dealer or call Solecis if you need to replace the power cord.

Grounding

The interface is grounded through the grounding conductor on the power cord. To avoid electric shock plug the power cord into a properly wired receptacle. Do not defeat the purpose of the grounding-type plug.

Fuse

For protection against the risk of fire use only a fuse of the same rating and type.

Liquid Spills

Do not set drinks on top of the unit or immerse the unit in liquid.

Do Not Disassemble

The switcher contains no user serviceable parts. All servicing must be performed by a qualified service technician.

For Safety Reasons

- Do not place the unit on an unstable surface.
- Do not use near water or sources of heat.
- Use only recommended attachments.
- Use the correct power supply as indicated on the unit.
- Unplug the unit from the mains before and refer to a qualified technician if:
  - the power cord has become damaged
  - liquid has been spilled or it has been exposed to rain or water
  - it does not operate correctly
  - it has been dropped or the cabinet damaged.

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Overview

The Solecis AVS-SL-PR-0201-0301 Presentation Switcher (**FG1330-2020-01**) combines switching of PC, computer, video and audio for presentation and conference rooms, home cinema, AV Rental Companies and any environment where a number of mixed source types need to be displayed.

(front)

(rear)

FIG. 1 Solecis AVS-SL-PR-0201-0301 Presentation Switcher

The AVS-SL-PR-0201-0301 features a total of 5 AV inputs and a programmable serial output for controlling projectors, plasma and LCD displays.

There are 2 wide-band (250MHz -3dB) computer inputs on HD-15 connectors, 3 video inputs each of which can be either composite or YC. 5 stereo audio follow-video/computer inputs on RCA/Captive-Wire connectors each with independent volume control and preset input attenuation which is retained within the non-volatile memory of the AVS-SL-PR-0201-0301.

Full video and audio breakaway is available with RS232 control along with a master volume control for total flexibility. Regardless of the video input type (CV or YC), both CV and YC outputs are available simultaneously which allows mixed format inputs to be displayed without switching.

The AVS-SL-PR-0201-0301 also supports a balanced microphone (with phantom power if required) for which the gain and tone can easily be adjusted from the PC based setup software. The microphone input can be mixed onto the switched audio output and is then presented on a balanced mixed output.

Control of the AVS-SL-PR-0201-0301 can be from the front panel or by RS232 control from a computer or AV control system. The programmable serial output will control power on and off and switch the inputs of the projector or display. It is easily programmed using the Solecis Device Configuration Software which includes a library of common display devices to reduce installation time.

Projector control includes programmable RS232 commands for Power ON/OFF, RGB, YC and CV inputs and when supported, the devices power status is interrogated and displayed on the front panel.

Product Specifications

AVS-SL-PR-0201-0301 Specifications	
RGB	
RGB Inputs:	2
Connector:	HD-15
Level:	Analog
Max Level:	1V p-p
Impedance:	75 ohm
Bandwidth	250MHz -3dB
Return Loss	-38dB @ 10MHz, -20dB @ 100MHz
Adjacent Input Crosstalk:	-80dB @ 10MHz, -70dB @ 100MHz
Sync Input	
Level:	TTL / Analog
Max Level:	5V p-p
Impedance:	75 ohm
Video Input	
Number:	3
Connectors:	RCA & 4 pin mini din S-Video
Type:	CV or YC
Bandwidth:	50 MHz -3dB
Differential Phase Error:	0.05%
Differential Gain Error:	0.03%
Crosstalk:	-60dB @ 1MHz
Audio Input	
Number:	6
Level:	Analog
Connector:	RCA
Type:	Unbalanced analog
Max Level	2V p-p
Impedance	47K ohm
Audio Response	20Hz - 50KHz
Microphone	Balanced / Unbalanced
Phantom Power	12V internal / 48V max external
RGB Output	
Number:	2
Connector:	HD-15
Level:	Analog
Gain:	Unity
Sync	Output
Impedance:	75 ohm
Sync Level:	TTL
Sync Impedance:	75 ohm

AVS-SL-PR-0201-0301 Specifications (Cont.)	
Video Output	
Number	2
Connectors	RCA & 4 pin mini din S-Video
Audio Output	
Connector	RCA & Captive-wire
Switched	1 unbalanced with volume control
Mixed	1 balanced / unbalanced
Impedance	600 ohm
Power:	• 110-240V 50/60Hz • Power Connector: IEC
Power Consumption:	15W
Dimensions (HWD):	44 x 441 x 174
Weight:	1.4kg
Included Accessories:	1U Rack mounting kit
Certifications:	• CE • UL60950 • FCC class B, part 15 • RoHS/WEEE compliant

Connections

Make sure the unit is unplugged from the mains power source while making initial connections.

PC Connections

1. Connect the PC sources to the sockets labelled PC 1 & PC 2.
2. Connect the primary output to Output 1 and then if a secondary output is required, connect it to Output2.
3. Connect the audio sources for the PC inputs to the inputs labelled PC 1 & PC 2 in the audio block.

Video Connections

1. Connect the Composite and S-Video sources to the inputs labelled Video 1, Video 2 & Video 3.
2. Connect the corresponding audio input to it's socket in the audio block.
3. Connect the video display device to either the composite output and/or the S-Video output.

Do not connect a composite and s-video input to the same input, this may damage the equipment.
Only the video output should ever have both connections populated.

Audio Connections

1. If an auxiliary audio input is required then connect it to the input labelled AUX in the audio block.
2. Connect the audio output to the input of the chosen amplifier or other audio device.

Microphone Connections

The unit comes with an internal 12V supply for use as microphone phantom power. If this is not required or a separate phantom power supply is required then make sure the phantom power supply switch is set to the off position.

Make sure the phantom power settings are correct before connecting the microphone to avoid damage to equipment.
Do not exceed 48v phantom power supply, exceeding this limit may result in fire.

If a separate phantom power supply is required connect it to the screw terminals labelled **Power +** and **gnd**.

Connect the microphone to the balanced input labelled **Mic +**, - and **gnd**.

Balanced Output Connections

If balanced audio output is required connect it to the screw terminals labelled balanced output left & right, hot & cold and ground.

Serial Control Connections

Connect the display device serial control to the screw terminals labelled **Display Tx** & **Rx**.

For setting up the equipment and for remote control of the switch connect to the PC Comms Tx & Rx terminals.

The ground terminal is shared between the two connections.

Don't forget to cross connect the serial devices so the TX goes to RX and RX goes to TX and GROUND goes to GROUND.

Please double check all connections before connecting power to the unit.

Configuration

Overview

In order to correctly set up the AVS-SL-PR-0201-0301 switch please download the Solecis Device Manager software from our website - www.Solecis.co.uk then click on support. Once installed, make sure the switch is connected correctly to a PC serial port and then start the device installer software. The software will scan the serial ports on the PC and find the attached device (FIG. 2).

FIG. 2 Attached Devices

Double click on the required port and the devices front control status will then be displayed (FIG. 3).

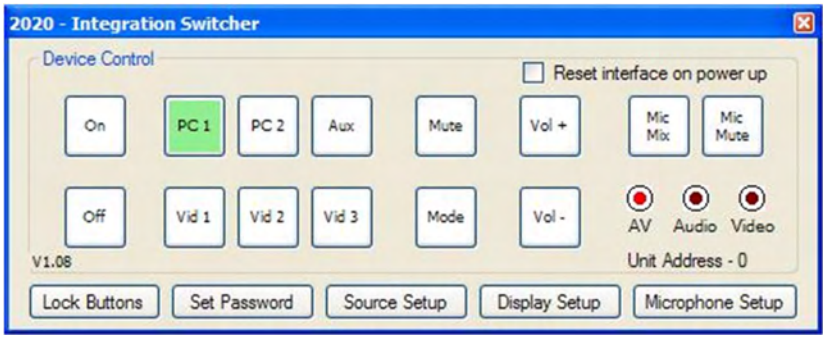

FIG. 3 Switch Status Monitor

FIG. 3 shows the PC control panel for the AVS-SL-PR-0201-0301, it replicates exactly what is seen on the front of the unit. Clicking on a button on the screen will have the same effect as manually pressing the equivalent button. Click on the Unit Address to change the value set for installation where multiple addressable units are required. When the reset interface option is checked then every time the power supply to the unit is reset, it will initialise itself into the default mode of PC 1 selected with no mix, no mute and the mode set to AV.

Microphone Setup

Clicking the set up microphone button brings up the window shown in FIG. 4. Dragging the arrows allows increase and decrease of a setting whilst centre all sets the values back to their middle value.

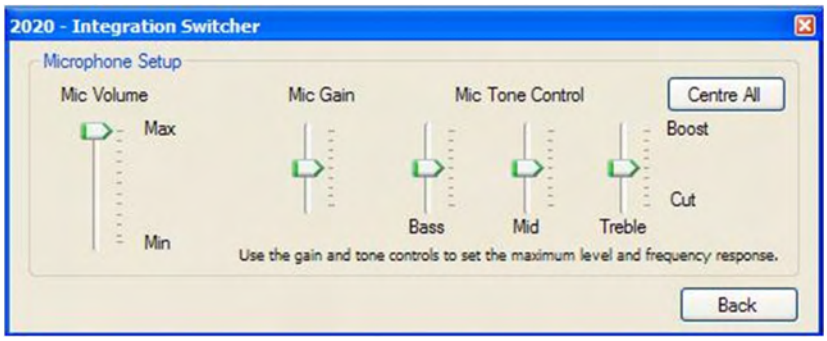

FIG. 4 Microphone setup

To return to the main screen click on back.

Display Setup

Click on the set up display device button brings up the window shown in FIG. 5. From here you can tell the switcher what device is attached by selecting the make, type and model from the list.

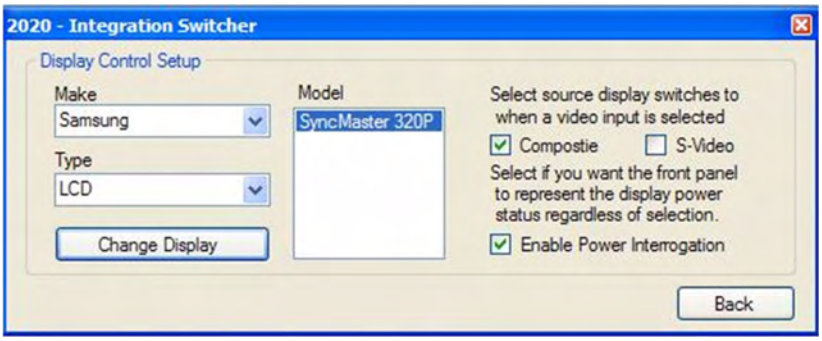

FIG. 5 Setting up the display device

The video source selection tells the switcher which input you are using on the display device. For example in FIG. 5, when a video input button is pressed, the display device would switch to it's composite input and if the S-Video option were checked then it would switch to it's S-Video input. There is no option to select which PC input the display device switches to when a PC input button is pressed, this will always be PC1 in the library. If a different input is required then the library must be edited for the desired results.

Having the use power interrogation checked will allow (if supported by the display device) the display on / off buttons on the switcher to reflect the real status of the display device and not just what was last pressed. This means that if the display device is turned off say for example via the remote control then the switcher would reflect this information back to the switch panel by lighting the power off button.

When ready, click on **Change Display** to save the settings into the switch.

Sources Setup

Clicking on set up sources brings up FIG. 6. This allows you to set the volume attenuation levels for each of the audio inputs. When the master volume on the front panel is adjusted, it adjusts all of the input volume controls up to the point where the first input hits the maximum or minimum. This means the if for example PC1 input slider was higher than PC2 then you would never be able to get PC2's volume to the maximum because it would stop when PC1's volume reached that point.

2020 - Integration Switcher
Source Setup
Set whether the video inputs are composite or S-Video
Use the sliders to ser the input audio level attenuation
Video 1 Composite S-Video
Video 2 Composite S-Video
Video 3 Composite S-Video
PC1 PC2 Video 1 Video 2 Video 3 Aux
Back

FIG. 6 Set up sources

Here is where the video input types are also set. From FIG. 6 the input to video 1 would be S-Video, to video 2 would be composite and video 3 would also be S-Video.

Click **Back** to return to the main screen.

Locking Buttons

The lock buttons option allows you to select buttons that are disabled to the user (FIG. 7).

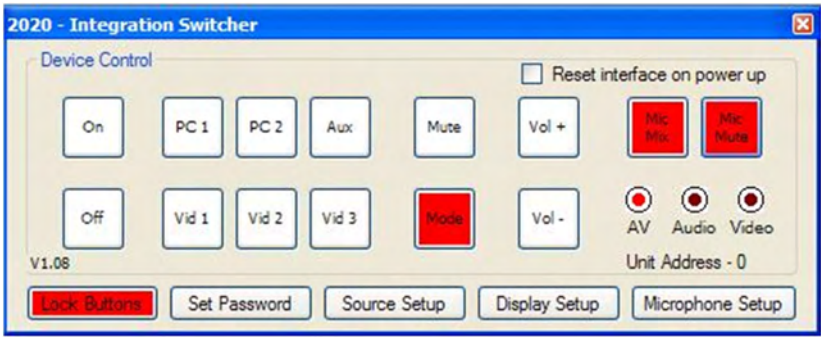

FIG. 7 Set up sources - Lock Buttons

The button lockout selection mode is indicated by the lock buttons control turning red and then when a control button is clicked the corresponding control also turns red. The items that are red are the buttons that will not be available from the front panel. Once the required buttons are selected, clicking on the lock buttons control will save the settings and restart the unit.

NOTE

Even if a button is disabled on the front panel, you will still be able to action it by sending the appropriate RS232 command into the PC Control port.

Operation

Power On

This button turns the display device on, the button lights to show the current status.

Power Off

This button turns the display device off, the butt on lights to show the current status.

PC1 & PC2

These button allow input selection of the two PC inputs. The button lights to reflect the press.

Video 1, 2 & 3

Same as PC1 & PC2 but for the video inputs.

AUX

Same again but for the auxiliary audio input. This can only be selected in AV & Audio modes.

Mute / Blank

Blanks the video and mutes the audio in AV mode, blank in video mode and mute in audio.

Mode

Toggles between the three modes, AV, Video and Audio.

Volume Up & Down

Used to control the volume of the line level output. This control is a master volume control and thus affects all of the input volume levels but does not change the differences in attenuation. There fore once the input with the highest attenuation level reaches minimum volume, the volume cannot be reduced any more regardless of the current input level. The same applies for increasing the volume.

Mic Mix

When selected, the switched audio is combined with the microphone onto the balanced output. By holding the mix button for 2-3 seconds, the unit is placed in microphone volume adjust mode. The volume control lights will flash and at which point the volume buttons will now control the microphone volume level only. Holding the mix button in for a further 2-3 seconds takes the unit back to normal operation and the buttons stop flashing.

Mic Mute

Mutes the microphone input when selected.

When the device is in audio breakaway mode, the input that is highlighted is the last button pressed, it does not necessarily reflect the full extents of the switcheroo current status. For example if in AV mode that PC1 was selected then the mode was change to video mode and Video 1 was selected then video 1 would be displayed but the audio would still be set the PC1 and not be reflected on the display at all.

Serial Commands

Communication Protocol

- Baud - 9600
- Data Bits - 8
- Stop Bits - 1
- Parity - None

Command Set

Serial Commands		
Command	**Description**	**Acknowledge Returned**
F2 09 EA 80	Requests Solecis device code – Header 6E, 2020 = 1D	6E 1D
9F 15 05	Simulates display device power on button	9F 15 05
9F 15 06	Simulates display device power off button	9F 15 06
9F 15 07	Simulates PC1 input button	9F 15 07
9F 15 08	Simulates PC2 input button	9F 15 08
9F 15 09	Simulates Video 1 input button	9F 15 09
9F 15 0A	Simulates Video 2 input button	9F 15 0A
9F 15 0B	Simulates Video 3 input button	9F 15 0B
9F 15 0C	Simulates AUX input button	9F 15 0C
9F 15 0D	Simulates mute / blank button	9F 15 0D
9F 15 0E	Simulates Mode button	9F 15 0E
9F 15 0F	Simulates Volume up button	9F 15 0F
9F 15 10	Simulates Volume down button	9F 15 10
9F 15 11	Simulates Microphone mix button	9F 15 11
9F 15 12	Simulates Microphone mute button	9F 15 12
9F 15 13	Requests front panel display status See below for information on decoding the returned data.	9F 15 13 xx xx xx xx
9F 15 14 VV	Sets the microphone volume (max 00 < VV < 80 min)	9F 15 14 VV
9F 15 15 01 VV	Sets the microphone gain (00 < VV < FF)	9F 15 15 01 VV
9F 15 15 02 VV	Sets the microphone bass (00 < VV < FF)	9F 15 15 02 VV
9F 15 15 04 VV	Sets the microphone mid (00 < VV < FF)	9F 15 15 04 VV
9F 15 15 08 VV	Sets the microphone treble (00 < VV < FF)	9F 15 15 08 VV
9F 15 17 VV	Sets the master volume (max 00 < VV < 80 min)	9F 15 17 VV
9F 15 18	Requests the master volume (max 00 < VV < 80 min)	9F 15 18 VV
9F 15 1A	Microphone Volume Up	9F 15 1A
9F 15 1B	Microphone Volume Down	9F 15 1B
9F 15 1C	Microphone Mix On	9F 15 1C
9F 15 1D	Microphone Mix Off	9F 15 !D
9F 15 1E	Microphone Mute On	9F 15 1E
9F 15 1F	Microphone Mute Off	9F 15 1F
9F 15 20	AV Mode	9F 15 20

Serial Commands (Cont.)		
9F 15 21	Audio Mode	9F 15 21
9F 15 22	Video Mode	9F 15 22
9F 15 40	PC Blank On	9F 15 40
9F 15 41	PC Blank Off	9F 15 41
9F 15 44	Video Blank On	9F 15 44
9F 15 45	Video Blank Off	9F 15 45
9F 15 48	Audio Mute On	9F 15 48
9F 15 49	Audio Mute Off	9F 15 49

These commands are global, if you have a unit address set these commands will override the address and still switch the unit. If you want to send addressed only codes out then you should replace the second byte by the units address.

So for example if **Unit 1** was set to address **1** and **Unit 2** to address **2** then:

- **9F 02 08** would set **unit 2** to **PC2** input
- **9F 01 0B** would set **unit 1** to **Video 3** input

Decoding the Front Panel Status

Byte No.	Bits 8:7	Bits 6:5	Bits 4:3	Bits 2:1
1	Display On	Display Off	PC1	PC2
2	Video 1	Video 2	Video 3	Aux
3	Blank / Mute	Mode	Volume Up	Volume Down
4	Microphone Mix	Microphone Mute	Current Switch Mode	

Then decode the 2 bits to give the relevant indicators status:

- 0:0 = Off
- 0:1 = On
- 1:0 = Flash

And the current switch mode:

- 0001 = AV Mode
- 0010 = Video mode
- 0100 = Audio mode

Troubleshooting

Q. Device Installer can't find my switch.

- *Make sure that the serial connections are wired correctly, tx to rx, rx to tx and ground to ground.*
- *If using a USB adapter, try removing it and plugging it in to a different USB port on the PC.*
- *Make sure the PC is connected to the PC communications port and not the display's communication port.*

Q. My display device does not respond to button presses.

- *Make sure the system is configured for the correct display device.*
- *Make sure the serial connections to the display device are correct, tx to rx, rx to tx and ground to ground.*
- *If the display power buttons flash for a second after pressing one then there is no display device configured for use with the switch. See section 3 on configuring the switch.*
- *Make sure the communication settings are correct, have a look in the library files to do this.*
- *Make sure there is power to the display device and that there is no internal settings to allow serial communications which must first be turned on.*

Q. Can I control multiple display devices.

A. Yes as long as they are all the same command set then you can connect the tx line from the switch to as many display device as required. The rx however should only be connect to a single display device, leave the rest of the displays detached.

Q. The front panel says the switch is set to PC1 but the audio is coming from Video 1.

A. Check that the switch is in AV mode, if not press the mode button until it is in AV mode and select the input again.

Q. Can I mix the microphone onto the RCA audio output?

A. No, but you can connect the left and right hot (L+ & R+) from the balanced output to the amplifier, then select mic mix and both sources will be present at equivalent to line levels.

Q. How do I reset the switch?

A. Disconnect the power to the device, hold in the display power on & off buttons and reconnect power to the switch. All 3 mode lights should be illuminated to acknowledge the reset. Reset the power once more to resume normal operation. If necessary attach a computer and reprogram the device.

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